

DRAFT

**INITIAL STUDY
MITIGATED NEGATIVE DECLARATION**

VARNER HARBOR DREDGING PROJECT

January 2007



State of California
DEPARTMENT OF PARKS AND RECREATION

MITIGATED NEGATIVE DECLARATION

PROJECT: **VARNER HARBOR DREDGING PROJECT**

LEAD AGENCY: California Department of Parks and Recreation

AVAILABILITY OF DOCUMENTS: The Initial Study for this Mitigated Negative Declaration is available for review at:

- Colorado District Headquarters
California Department of Parks & Recreation
200 Palm Canyon Drive
Borrego Springs, CA 92004
- Salton Sea State Recreation Area, Sector Office
100-225 State Park Road
North Shore, CA 92254
- Coachella Branch Library
1538 Seventh St.
Coachella, CA 92236

PROJECT DESCRIPTION:

The project is the dredging of the channel entrance to Varner Harbor, Salton Sea State Recreation Area, from the Salton Sea. Up to 8,000 cubic yards of material are expected to be removed to clear the channel for boat traffic. In addition, the channel's northern jetty would be rebuilt using rip rap materials, and the existing southern jetty would be reinforced with additional rip rap. The dredged material would be deposited on the beach immediately north of the northern jetty to restore the eroded beach. An additional 4,000 cubic yards of sediment are proposed for dredging from the channel within the next five years.

A copy of the Initial Study is attached. Questions or comments regarding this Initial Study/Mitigated Negative Declaration may be addressed to:

David Lawhead, District Environmental Coordinator
California Department of Parks & Recreation
Colorado Desert District
200 Palm Canyon Drive
Borrego Springs, CA 92004

Pursuant to Section 21082.1 of the California Environmental Quality Act, the California Department of Parks and Recreation (DPR) has independently reviewed and analyzed the Initial Study and Negative Declaration for the proposed project and finds that these documents reflect the independent judgment of DPR. DPR, as lead agency, also confirms

that the project mitigation measures detailed in these documents are feasible and will be implemented as stated in the Negative Declaration.

Michael L. Wells, Ph.D.
District Superintendent

Date

David Lawhead
Environmental Coordinator

Date

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- A** Natural Resources Technical Report for the Varner Harbor Dredging Project
- B** MITIGATION MONITORING AND REPORTING PROGRAM

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

The Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Varner Harbor Dredging Project at the Salton Sea State Recreation Area, Riverside County, California. This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §21000 *et seq.*, and the State CEQA Guidelines, California Code of Regulations (CCR) §15000 *et seq.*

An Initial Study is conducted by a lead agency to determine if a project may have a significant effect on the environment [CEQA Guidelines §15063(a)]. If there is substantial evidence that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) must be prepared, in accordance with CEQA Guidelines §15064(a). However, if the lead agency determines that revisions in the project plans or proposals made by or agreed to by the applicant mitigate the potentially significant effects to a less-than-significant level, a Mitigated Negative Declaration may be prepared instead of an EIR [CEQA Guidelines §15070(b)]. The lead agency prepares a written statement describing the reasons a proposed project would not have a significant effect on the environment and, therefore, why an EIR need not be prepared. This IS/MND conforms to the content requirements under CEQA Guidelines §15071.

1.2 LEAD AGENCY

The lead agency is the public agency with primary approval authority over the proposed project. In accordance with CEQA Guidelines §15051(b)(1), "the lead agency will normally be an agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." The lead agency for the proposed project is DPR. The contact person for the lead agency is:

David Lawhead, District Environmental Coordinator
CA Dept. of Parks and Recreation
Colorado Desert District
200 Palm Canyon Drive
Borrego Springs, CA 92004
(760) 767-4315

All inquiries regarding environmental compliance for this project, including comments on this environmental document should be addressed to:

David Lawhead, District Environmental Coordinator (address above)

1.3 PURPOSE AND DOCUMENT ORGANIZATION

The purpose of this document is to evaluate the potential environmental effects of the proposed Varner Harbor Dredging Project at the Salton Sea State Recreation Area. Mitigation measures have also been incorporated into the project to eliminate any potentially significant impacts or reduce them to a less-than-significant level.

This document is organized as follows:

- Chapter 1 - Introduction.
This chapter provides an introduction to the project and describes the purpose and organization of this document.
- Chapter 2 - Project Description.
This chapter describes the reasons for the project, scope of the project, and project objectives.
- Chapter 3 - Environmental Setting, Impacts, and Mitigation Measures.
This chapter identifies the significance of potential environmental impacts, explains the environmental setting for each environmental issue, and evaluates the potential impacts identified in the CEQA Environmental (Initial Study) Checklist. Mitigation measures are incorporated, where appropriate, to reduce potentially significant impacts to a less-than-significant level.
- Chapter 4 - Mandatory Findings of Significance
This chapter identifies and summarizes the overall significance of any potential impacts to natural and cultural resources, cumulative impacts, and impact to humans, as identified in the Initial Study.
- Chapter 5 - Summary of Mitigation Measures.
This chapter summarizes the mitigation measures incorporated into the project as a result of the Initial Study.
- Chapter 6 - References.
This chapter identifies the references and sources used in the preparation of this IS/MND. It also provides a list of those involved in the preparation of this document.
- Chapter 7 - Report Preparation
This chapter provides a list of those involved in the preparation of this document.

1.4 SUMMARY OF FINDINGS

Chapter 3 of this document contains the Environmental (Initial Study) Checklist that identifies the potential environmental impacts (by environmental issue) and a brief discussion of each impact resulting from implementation of the proposed project.

Based on the IS and supporting environmental analysis provided in this document, the proposed Varner Harbor Dredging Project would result in less-than-significant impacts for the following issues: aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

In accordance with §15064(f) of the CEQA Guidelines, a MND shall be prepared if the proposed project will not have a significant effect on the environment after the inclusion of mitigation measures in the project. Based on the available project information and the environmental analysis presented in this document, there is no substantial evidence that, after the incorporation of mitigation measures, the proposed project would have a significant effect on the environment. It is proposed that a Mitigated Negative Declaration be adopted in accordance with the CEQA Guidelines.

CHAPTER 2

PROJECT DESCRIPTION

2.1 INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the California Department of Parks and Recreation (DPR) to evaluate the potential environmental effects of the proposed Varner Harbor Dredging Project at the Salton Sea State Recreation Area, located in Riverside County, California. The proposed project would dredge the harbor channel entrance and restore the previous functions of the harbor as an access point for boat launching into the Salton Sea for recreational, scientific research, and law enforcement/public safety uses.

2.2 PROJECT LOCATION

The project is located at the Salton Sea State Recreation Area (SSSRA), Riverside County, on the northeastern shore of the Salton Sea. The SSSRA is accessed off of Highway 111, south of Highway 86. The SSSRA administrative headquarters and Visitor Center are located at the north end of the SSSRA property, just south of the community of North Shore. Varner Harbor is located immediately south of the SSSRA Visitor Center.

2.3 BACKGROUND AND NEED FOR THE PROJECT

Varner Harbor is the sole harbor operated by the California Department of Parks and Recreation (CDPR) at the Salton Sea, and provides boat-launching facilities for recreational visitors, law enforcement and safety personnel, and scientific researchers. Because of past rising water levels in the sea, the northern channel jetty has become inundated and is no longer functional. Wind and wave action, and the currents in the sea, have caused sediments to be deposited in the compromised channel, reducing its depth from 10 feet to 2 to 4 feet. Sediment deposits have also reduced the passable width of the channel from 60 feet to approximately 10 feet. Much of the sediment deposited into the channel comes from the adjacent beach to the north. CDPR was recently forced to close the harbor to public boating (September 2006) because the channel is no longer safely passable.

2.4 PROJECT OBJECTIVES

Project objectives include removal of up to 8,000 cubic yards of sediments, composed primarily of sands and barnacle shells, from the Varner harbor channel to restore its function, reconstruction of the northern channel jetty to retard future sediment flow into the channel, reinforcement of the southern jetty to reduce the risk of erosion, and deposition of dredged sediment on the beach north of the channel to restore it back to its original condition. An additional

smaller dredging (4,000 cubic yards) of the channel is proposed, if needed, within the next five years to keep the channel clear of sediments.

2.5 PROJECT DESCRIPTION

Refer to the attached Natural Resources Technical Report for a complete description of the project, potential project impacts, and mitigation measures.

2.6 PROJECT IMPLEMENTATION

The project will be implemented as soon as all required permits are obtained. It is anticipated that the project will proceed during the first half of 2007.

2.7 VISITATION TO SALTON SEA STATE RECREATION AREA

2003/2004 – Visitors to SSSRA (day use and overnight): 227,670;

Boats launched: 81

2004/2005 – Visitors: 328,019; Boats launched: 55

2005/2006 – Visitors: 287,805; Boats launched: 46

2.8 CONSISTENCY WITH LOCAL PLANS AND POLICIES

The project is consistent with CDPR uses within the SSSRA, and is intended to restore a function and use of the harbor that has been on-going since the 1950's.

2.9 DISCRETIONARY APPROVALS

This project will require discretionary approval/permits from the California Department of Fish and Game (Fish and Game Code 1601, Streambed Alteration Agreement, and Fish and Game Code 2080.1, CA Endangered Species Act Consistency Determination), U.S. Fish and Wildlife Service ESA Section 7 Consultation, U.S. Army Corps of Engineers (404 Permit), and State Water Resource Control Board (401 Certification).

2.10 RELATED PROJECTS

DPR may conduct routine maintenance on SSSRA facilities (e.g., camping and day-use facilities) during the time that the Varner Harbor dredging project is carried out. However, the impacts from those maintenance activities are not expected to have a significant impact to the environment, either singly or cumulatively.

CHAPTER 3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

- | | |
|--|---|
| 1. Project Title: | Varner Harbor Dredging Project |
| 2. Lead Agency Name & Address: | California Department of Parks and Recreation |
| 3. Contact Person & Phone Number: | David Lawhead, (760) 767-4315 |
| 4. Project Location: | Salton Sea State Recreation Area, Riverside County |
| 5. Project Sponsor Name & Address: | California Department of Parks and Recreation
Colorado Desert District
200 Palm Canyon Drive
Borrego Springs, CA 92004 |
| 6. General Plan Designation: | NA |
| 7. Zoning: | NA |
| 8. Description of Project: | Dredging of accumulated sediments (8,000 cubic yards) within the Varner Harbor entrance channel, rebuilding of the northern jetty of the channel, placement of rip rap along the southern channel jetty, and deposition of dredged sediments on the Salton Sea beach immediately north of the northern jetty. A second dredging (4,000 cubic yards) is proposed within the next five years if needed. |
| 9. Surrounding Land Uses & Setting: | Refer to Chapter 3 of this document (Section IX, Land Use Planning) |
| 10. Approval Required from Other Public Agencies | Refer to Chapter 2, Section 2.9 |

1. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact", as indicated by the checklist on the following pages.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| X Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| X Hazards & Hazardous Materials | X Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing |
| <input type="checkbox"/> Public Services | X Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | None |

DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment and a **NEGATIVE DECLARATION** will be prepared. ☐

I find that, although the original scope of the proposed project **COULD** have had a significant effect on the environment, there **WILL NOT** be a significant effect because revisions/mitigations to the project have been made by or agreed to by the applicant. A **MITIGATED NEGATIVE DECLARATION** will be prepared. ☒

I find that the proposed project **MAY** have a significant effect on the environment and an **ENVIRONMENTAL IMPACT REPORT** or its functional equivalent will be prepared. ☐

I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated impact" on the environment. However, at least one impact has been adequately analyzed in an earlier document, pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis, as described in the report's attachments. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the impacts not sufficiently addressed in previous documents. ☐

I find that, although the proposed project could have had a significant effect on the environment, because all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration, pursuant to applicable standards, and have been avoided or mitigated, pursuant to an earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, all impacts have been avoided or mitigated to a less-than-significant level and no further action is required. ☐

David Lawhead
Environmental Coordinator

Date

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers, except "No Impact", that are adequately supported by the information sources cited. A "No Impact" answer is adequately supported if the referenced information sources show that the impact does not apply to the project being evaluated (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on general or project-specific factors (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must consider the whole of the project-related effects, both direct and indirect, including off-site, cumulative, construction, and operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether that impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate when there is sufficient evidence that a substantial or potentially substantial adverse change may occur in any of the physical conditions within the area affected by the project that cannot be mitigated below a level of significance. If there are one or more "Potentially Significant Impact" entries, an Environmental Impact Report (EIR) is required.
4. A "Mitigated Negative Declaration" (Negative Declaration: Less Than Significant with Mitigation Incorporated) applies where the incorporation of mitigation measures, prior to declaration of project approval, has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact with Mitigation." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR (including a General Plan) or Negative Declaration [CCR, Guidelines for the Implementation of CEQA, § 15063(c)(3)(D)]. References to an earlier analysis should:
 - a) Identify the earlier analysis and state where it is available for review.
 - b) Indicate which effects from the environmental checklist were adequately analyzed in the earlier document, pursuant to applicable legal standards, and whether these effects were adequately addressed by mitigation measures included in that analysis.
 - c) Describe the mitigation measures in this document that were incorporated or refined from the earlier document and indicate to what extent they address site-specific conditions for this project.
6. Lead agencies are encouraged to incorporate references to information sources for potential impacts into the checklist or appendix (e.g., general plans, zoning ordinances, biological assessments). Reference to a previously prepared or outside document should include an indication of the page or pages where the statement is substantiated.
7. A source list should be appended to this document. Sources used or individuals contacted should be listed in the source list and cited in the discussion.
8. Explanation(s) of each issue should identify:
 - a) the criteria or threshold, if any, used to evaluate the significance of the impact addressed by each question **and**
 - b) the mitigation measures, if any, prescribed to reduce the impact below the level of significance.

ENVIRONMENTAL ISSUES

I. AESTHETICS.

ENVIRONMENTAL SETTING

The 18,000-acre Salton Sea State Recreation Area (SSSRA) is located on the northwest shore of the Salton Sea, immediately south of the community of North Shore. The SSSRA headquarters area includes the Sector administrative offices and residences, the Visitor Center, developed beach camping and picnicking areas, and the Varner Harbor facility. The panoramic view to the west from Varner Harbor includes the entire expanse of the Salton Sea, and the Santa Rosa Mountains beyond. To the east, beyond SSSRA roads and the Visitor Center, State Route 111, and railroad tracks lie undeveloped hills supporting desert scrub habitats. The view to the north includes the large paved Visitor Center parking lot and the SSSRA administrative buildings, and to the south undeveloped shoreline of the Salton Sea..

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	x	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	x	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

a,c) The project is not expected to have a significant impact to the aesthetic vistas that visitors to the SSSRA would enjoy. However, for the up to two week period that excavation equipment would be present at the harbor channel, this would impact the view of the Salton Sea from the SSSRA Visitor Center. Because of the short time period the views would be affected, and the relatively small percentage of the total viewshed that would be briefly impacted, the impact would be less than significant.

II. AGRICULTURAL RESOURCES.

ENVIRONMENTAL SETTING

The project is wholly contained within the SSSRA and no lands designated for agricultural use are present within the recreation area. Agricultural lands are designated and in active production to the north of the SSSRA adjacent to the Salton Sea in and around the North Shore area. These private agricultural lands are not in the vicinity of Varner Harbor.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT*:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

* In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997), prepared by the California Department of Conservation as an optional model for use in assessing impacts on agricultural and farmland.

DISCUSSION

No agricultural resources would be impacted by this project, as no such designated lands are present in the SSSRA, or immediately adjacent to Varner Harbor.

III. AIR QUALITY.

ENVIRONMENTAL SETTING

The Riverside County portion of the Salton Sea Air Basin is designated as a federal serious non-attainment area for the 8-hour ozone NAAQS (National Ambient Air Quality Standards), and a serious non-attainment area for the PM₁₀ (particulate matter) NAAQS. All areas of Riverside County are in attainment of the NAAQS for CO, NO₂, and SO₂. The entire County is designated as a State non-attainment area for ozone and PM₁₀. Ozone pollution is primarily a seasonal problem (May through October) because of photochemical reactions with sunlight. In the Salton Sea Air Basin, fugitive windblown dust, wind erosion of exposed soil, and vehicle traffic over unpaved roads are the major sources of fugitive dust (PM₁₀).

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT*:				
a) Conflict with or obstruct implementation of the applicable air quality plan or regulation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations (e.g., children, the elderly, individuals with compromised respiratory or immune systems)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>

* Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make these determinations.

DISCUSSION

- a) The project would not obstruct implementation of an air quality plan or regulation.
- b) The use of a diesel-powered excavator to carry out the harbor channel dredging operation would potentially add a small amount of pollution discharge into the air in the form of exhaust. However, the small amount of air pollution discharged during the course of the project would be insignificant, and not contribute substantially to an existing air quality violation.

- c) Because of the small amount of diesel motor exhaust that this project would produce, and the short time duration of the project, there would not be a considerable net increase of any criteria pollutant for which the Salton Sea Air Basin is not in attainment.
- d) The project is not expected to subject sensitive receptors to substantial pollution concentrations. The project site is in the immediate vicinity of a well-traveled State highway (State Route 111), which is a much greater ongoing source of car and truck exhaust emissions than the Varner Harbor Dredging Project.
- e) Odors from diesel motor exhaust may be objectionable to those in the immediate vicinity of the excavator, however, for safety purposes the public will be kept away from the excavation equipment. Frequent windy conditions at the Salton Sea should also dissipate exhaust fumes quickly in the area, reducing further any odors. It is anticipated that the dredging operation may actually reduce potential odor problems at Varner Harbor by enhancing water circulation in the harbor and reducing the effects of eutrophication, which can result in foul odors.

IV. BIOLOGICAL RESOURCES.

ENVIRONMENTAL SETTING

Varner Harbor is a developed facility at the headquarters complex of the Salton Sea State Recreation Area (SSSRA). Much of the surrounding shoreline and upland areas have been developed by DPR for public recreation and education purposes, as well as SSSRA maintenance. Other facilities include the SSSRA Visitor Center and parking lot, SSSRA administrative offices, park personnel residences, maintenance shops, and public day use and overnight camping areas. Much of the immediate shoreline surrounding the Varner Harbor channel is barren soils, composed of previously deposited dredged sediments. No sensitive plant species are known to occur in the vicinity of the harbor. A number of wildlife species have been documented to occur in and around the harbor complex (see Appendix A). Various shorebirds and waterfowl species make use of the shoreline for foraging and breeding during certain times of the year. The brown pelican (*Pelicanus occidentalis*), a federal and state-listed endangered species, has been observed in the vicinity of the harbor during the summer foraging in the Salton Sea. The harbor itself supports a number of introduced fish species, and the talpia (*Talipia zilli* and *Oreochromis* sp.) is known to breed in the harbor. The desert pupfish (*Cyprinodon macularis*) is the only fish species endemic to the Salton Sea, and is a federal and state-listed endangered species. This fish has been documented to occur in the harbor by the California Department of Fish and Game, although breeding in the harbor has not been confirmed. Refer to Appendix A, *Natural Resources Technical Report for the Varner Harbor Dredging Project*, for a more detailed description of the biological resources of Varner Harbor, and potential environmental effects of the project.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a sensitive, candidate, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands, as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>

wildlife nursery sites?

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|---|
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | x |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | x |

DISCUSSION

- a) The dredging of the Varner harbor channel has the potential to “take” directly or indirectly the desert pupfish. Potential “take” could be in the form of direct loss of individuals during the excavation process, or harassment due to restriction of movement of pupfish through the channel or temporary loss of habitat in the channel. Because of the difficulty in censusing pupfish, it cannot be assumed that all impacts to the pupfish can be avoided. Mitigation measures listed below would render the impacts to the pupfish less than significant. It is expected that the dredging project will actually enhance and restore pupfish habitat within Varner Harbor, which is declining in quality, and will eventually be lost, as blockage of the harbor channel continues to worsen.

MITIGATION MEASURE BIO-1

- Pupfish-proof barriers (silt fencing) will be placed at both entrances to the harbor channel, and between the Salton Sea shoreline and the rebuilt northern jetty, to exclude pupfish from the dredging areas before dredging begins.
- Once pupfish barriers are established, a pupfish removal live-trapping program will be instituted to remove pupfish trapped within the construction zone. Trapping will continue until 5 continuous days of trapping result in no pupfish captures. All captured pupfish will be transferred and released immediately within the adjacent shallow waters of the Salton Sea. Trapping protocols will follow USFWS and CDFG requirements.
- Monitoring of pupfish in Varner Harbor will continue after the project is complete to assess on-going pupfish use of the harbor and channel.

The endangered brown pelican may be temporarily discouraged from foraging in the harbor area during the dredging process. However, the harbor represents a very small portion of the foraging habitat for this species at the Salton Sea, and the temporary impacts are less than significant.

Migratory shorebirds and waterfowl may use the beach areas near the channel for breeding activity. The construction activity could disrupt activities due to the presence of workers in the area, and noise from the excavator, and the deposit of dredged materials on the beach.

MITIGATION MEASURE BIO-2

- Dredging activities will not be conducted during the months of March, April and May to reduce potential impacts to breeding birds in the immediate area.

- b) The Salton Sea is considered a significant wetland resource by both the California Dept. of Fish and Game and the U.S. Fish and Wildlife Service because of the significant wildlife resources found at, and dependent upon, the sea. The temporary impacts to the harbor channel due the dredging operations would not be significant due to the temporary nature of the operation and the short timeline for the impacts to occur. It is anticipated that the channel dredging will actually provide minor enhancements to the Salton Sea in the vicinity of Varner Harbor by improving water circulation between the sea and the harbor, and reducing the potential impacts of eutrophication within the harbor.
- c) The proposed project would result in excavation of unvegetated wetland habitat and placement of fill along the eroded Salton Sea beach immediately north of the channel. Much of the sediment to be removed from the channel originated at the beach where the fill will be placed. Wind and wave patterns at the sea, combined with the loss of the northern channel jetty, have accelerated erosion from the beach into the channel.
- d) The dredging operation may temporarily interfere with possible migratory movements of the desert pupfish along the shallow shoreline waters of the Salton Sea into and out of Varner Harbor. The extent of this migratory activity is unknown, but is assumed to occur for this impact analysis (see Appendix A for more discussion). Blockage of the harbor channel for up to two weeks may impact pupfish movements, but the effects are temporary, and not expected to have a long-term affect upon the pupfish population. If the dredging project does not proceed, the harbor channel will continue to fill with sediment eventually completely blocking access into and out of the harbor, permanently disrupting traditional movement corridors. Impacts to pupfish movement corridors would be less than significant in the short-term, and the project is expected to have a long-term net benefit to pupfish migration. Mitigation measures listed above (MM Bio-1) should reduce impacts to below a level of significance.
- e) This project is not in conflict with any local ordinances protecting biological resources.
- f) This project is not in conflict with any Habitat Conservation Plan.

V. CULTURAL RESOURCES.

ENVIRONMENTAL SETTING

The most reliable evidence of initial human occupation in California dates to about 12,000 years ago, and is represented in Southern California by the San Dieguito complex, a hunting tradition. Between 7,500 to 3,000 years ago, the Archaic period, the climate became warmer and drier, and the Native Americans present showed an increased use of plant resources with the presence of manos and metates. During the Late Prehistoric period, 1,500 years ago, Great Basin Shoshonean speakers migrated into Southern California. The predominant Native American group in the northern portion of what is now the Salton Sea, previously ancient Lake Cahuilla, is the Cahuilla tribal group. Many archeological sites have been found along the ancient shoreline of Lake Cahuilla.

The Varner Harbor facility is a man-made complex that was created in the 1950s to provide recreational and educational opportunities for the general public. The harbor and surrounding area do not support any historically significant structures or landscapes. No archeological sites are known to be present in the vicinity. All of the harbor channel structures are composed of previously excavated material placed on site. No archeological sites would be impacted from the dredging of the harbor channel.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Cause a substantial adverse change in the significance of a historical resource, as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

a-c) No cultural resources would be impacted by this project., and no significant cultural resources are known to occur in the vicinity of the project site.

VI. GEOLOGY AND SOILS.

ENVIRONMENTAL SETTING

The project is located within a seismically active area, in the vicinity of the San Andreas Fault. The entire Salton Sea Basin is geologically a very active zone, and earthquakes are common. Most of the upland areas surrounding the harbor are composed of previously dredged materials from the Salton Sea floor and shoreline, predominantly sandy sediments and barnacle shells. While there are undoubtedly some fine silts and clays present in the harbor and channel bottoms, the vast majority of these finer sediments are deposited in the deeper central portions of the Salton Sea, and not the shoreline.

WOULD THE PROJECT:	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area, or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Be located on a geologic unit or soil that is unstable, or that would become unstable, as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems, where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
f) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

The project site is in a seismically active region, however, no structures that might pose a risk to the public due to seismic activity are proposed to be built by this project.

VII. HAZARDS AND HAZARDOUS MATERIALS.

ENVIRONMENTAL SETTING

The element selenium is documented to occur in the Salton Sea ecosystem. The potential for the release of additional selenium into the Salton Sea water column is the primary concern of this dredging project. If high concentrations of selenium are released into the waters of the Salton Sea it has the potential to enter the aquatic food chain, and eventually be taken up and concentrated in terrestrial wildlife species, particularly birds, with often toxic consequences. Selenium concentrations within the waters of the Salton Sea are currently low enough to not be considered a threat to wildlife or humans. The vast majority of selenium enters the sea through agricultural run-off, with selenium being found naturally within the irrigation water obtained from the Colorado River. The vast majority of selenium entering the Salton Sea is sequestered and bound in the finer silt and clay sediments that make up the sea floor, especially the central deeper portions of the sea. The concern is whether excavation of sediments containing selenium could reintroduce this element into the water column in sufficient concentrations to be a threat to wildlife species in the area. Refer to Appendix A for a more thorough discussion of the role of selenium in the Salton Sea ecosystem.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials, substances, or waste into the environment?	<input type="checkbox"/>		x	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
d) Be located on a site which is included on a list of hazardous materials sites, compiled pursuant to Government Code §65962.5, and, as a result, create a significant hazard to the public or environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
f) Be located in the vicinity of a private airstrip? If so, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|---|
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | x |
| h) Expose people or structures to a significant risk of loss, injury, or death from wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | x |

DISCUSSION

- a-b) The excavation of Varner Harbor channel sediments has the potential to release selenium that was sequestered in the channel sediments into the water column. Refer to Appendix A for a more detailed discussion of selenium in the Salton Sea. Based upon research studies of selenium distribution within the Salton Sea ecosystem, and research modeling the concentration of sediment-bound selenium across the Salton Sea floor, it is anticipated that the concentration of selenium within the coarse-grain sandy channel deposits to be dredged is low, and not a threat to humans or wildlife. Any sediment stirred into the water column from the dredging operation would be in small amounts and quickly settle back to the bottom of the sea/harbor. Selenium deposited with the sediments placed on the adjacent shoreline would also be of very low concentrations (0.2-0.8 micrograms/grams dry weight), well below EPA standards for safety.

MITIGATION MEASURE HAZMAT 1

- | |
|---|
| <ul style="list-style-type: none"> ▪ Silt fencing will be utilized to restrict the dispersal of any sediment released into the water column during the dredging of the channel and deposition of dredged materials on the adjacent shoreline. Silt fencing will be placed across each side of the channel, harbor side and seaside, during dredging, and just offshore of the deposition site, between the shoreline and the rebuilt northern jetty. |
|---|

VIII. HYDROLOGY AND WATER QUALITY.

ENVIRONMENTAL SETTING

Varner harbor is a man-made complex with a narrow (50-60 feet) channel connecting it to the Salton Sea. The harbor has recently been closed (September 2006) to public use because sedimentation in the harbor channel has reduced the width and depth of the channel to the point where it is unsafe for boating. It is anticipated that without dredging of the channel that it will become completely blocked in the near future, and water circulation between the sea and the harbor will essentially cease. This condition will significantly reduce water quality in the harbor due to eutrophication. Dredging of the channel will restore not only public access to the Salton Sea but improve the water quality of the harbor waters. The other potential water quality issue is whether the dredging project would increase the risk of selenium release into the water column. Refer to Appendix A, and the information above under "Hazards and Hazardous Materials" for further discussion regarding selenium.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>		x	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
f) Substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map, or other flood hazard delineation map?

- h) Place structures that would impede or redirect flood flows within a 100-year flood hazard area? ☐ ☐ ☐ x

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
i) Expose people or structures to a significant risk of loss, injury, or death from flooding, including flooding resulting from the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

- a) This project would not violate water quality standards or waste discharge requirements.
- b) Groundwater would not be affected by this project.
- c) Historic water flow and drainage would be restored in the harbor by this project. With the reconstruction of the northern jetty, siltation within the harbor should be significantly reduced in the future.
- d) An existing drainage pattern is being restored, but would have no impacts to rates of surface runoff or result in an increased risk of flooding.
- e) The project would not alter existing runoff patterns or increase the potential to pollute runoff.
- f) The project is not expected to contribute to a substantial degradation of water quality. As discussed under the “Hazards and Hazardous material” section above, there is a potential for selenium sequestered in sea sediments to be released into the water column temporarily in the vicinity of the harbor as a result of dredging. While the impact from possible release of selenium into the water column is not significant, silt containment barriers will be placed to confine any released sediments to the immediate vicinity of the harbor channel and adjacent beach to the north. Released sediments are expected to settle back to the sea floor relatively quickly given the larger size (sands) of most of the sediment particles.

MITIGATION MEASURE HYDRO-1
<ul style="list-style-type: none"> Silt fencing will be utilized to restrict the dispersal of any sediment released into the water column during the dredging of the channel and deposition of dredged materials on the adjacent shoreline. Silt fencing will be placed across each side of the channel, harbor side and seaside, during dredging, and just offshore of the deposition site, between the shoreline and the rebuilt northern jetty.
MITIGATION MEASURE HYDRO-2
<ul style="list-style-type: none"> Best Management Practices will be observed during the dredging operations to assure that potential pollutants and eroded soils are excluded from the Salton Sea, Varner Harbor, and the harbor channel. These practices include: <ol style="list-style-type: none"> Areas of disturbed soil with slopes toward the sea will be stabilized to reduce

erosion potential.

2) Staging/storage areas for equipment and materials will be located at least 100 feet from the shoreline of the harbor or sea. Equipment shall be checked and maintained daily to prevent leaks of pollutants into the harbor or sea. No equipment maintenance will be done within 100 feet of the harbor or sea.

3) No project debris or rubbish will be allowed to enter into or be placed where it may be washed by rainfall or runoff in the harbor or sea.

- g) The construction of housing is not a part of this project.
- h) No structures will be built which will impede or redirect flood flows within a 100-year hazard area.
- i) This project will not alter the current risk of flooding in the Varner Harbor area.
- j) This project will not result in inundation by seiche, tsunami, or mudflow.

IX. LAND USE AND PLANNING.

ENVIRONMENTAL SETTING

Varner Harbor is a part of a larger complex of facilities at the Salton Sea State Recreation Area (SSSRA). SSSRA administrative headquarters, the SSSRA Visitor Center, parking lots, camping and day-use facilities, park personnel residences, and park maintenance yards are all in the vicinity of the harbor area. This complex is the primary focus for public use at the SSSRA. Varner Harbor is the primary boat-launching facility at the SSSRA, and is used by the general public for recreational activities, by law enforcement personnel (including DPR Rangers), and scientific researchers studying the Salton Sea.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
b) Conflict with the applicable land use plan, policy, or regulation of any agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

- a) The project would not divide an established community.
- b) The project is consistent with the land use policies of DPR and the Salton Sea State Recreation Area.
- c) This project is not in conflict with and habitat conservation plan or natural community conservation plan.

X. MINERAL RESOURCES.

ENVIRONMENTAL SETTING

No minerals of significance are known from the Varner Harbor site.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Result in the loss of availability of a known mineral resource that is or would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

a-b) No significant mineral resources are known from the project site.

XI. NOISE.

ENVIRONMENTAL SETTING

The Varner Harbor complex is located on the northeastern shoreline of the Salton Sea. The only significant noise source in the vicinity is State Route 111, just east of the harbor area. Because of agricultural activities in the Salton Sea Basin, large haul trucks frequently use SR-111 to transport agricultural products. Passenger cars are also common on this highway, but there are no major urban developments on the eastern side of the Salton Sea to generate high traffic numbers, and the noise that accompanies such traffic. Occasional engine noise from boats launched at Varner Harbor may be present, but this is sporadic, and currently the harbor is closed to boats.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Generate or expose people to noise levels in excess of standards established in a local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
b) Generate or expose people to excessive groundborne vibrations or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>		x
c) Create a substantial permanent increase in ambient noise levels in the vicinity of the project (above levels without the project)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
d) Create a substantial temporary or periodic increase in ambient noise levels in the vicinity of the project, in excess of noise levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport? If so, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
f) Be in the vicinity of a private airstrip? If so, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

- a) The use of an excavator to dredge the harbor channel would produce a noticeable noise increase during daylight hours of operation. This noise would only be present during the two week work period, and would not exceed state or federal standards.
- b) The public would not be exposed to groundborne vibrations or noise levels.

- c) Noise levels would only be elevated for no more than two weeks during daylight hours for each of the two proposed dredging periods.
- d) The project would increase the noise levels above ambient conditions during the two periods of dredging. However, the increase in noise would not be significantly greater than that generated by truck and auto traffic on adjacent SR-111.
- e) The project is not located within an airport land use plan.
- f) The project is not in the vicinity of a private airstrip.

XII. POPULATION AND HOUSING

ENVIRONMENTAL SETTING

The SSSRA is located just south of the unincorporated community of North Shore in Riverside County.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

- a) The project would have no impact upon population growth locally or in the region.
- b) No houses would be displaced by this project.
- c) No people would be displaced by this project.

XIII. PUBLIC SERVICES.

ENVIRONMENTAL SETTING

The Varner Harbor facility is primarily used for public recreation, including boating, at the Salton Sea. Law enforcement personnel also use the facility if necessary for law enforcement and rescue operations.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Result in significant environmental impacts from construction associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

The project is expected to improve public access to facilities by allowing the harbor to re-open for public use. This project will also enhance public safety at the SSSRA and surrounding portions of the Salton Sea by allowing access to law enforcement and water safety personnel.

XIV. RECREATION.

ENVIRONMENTAL SETTING

Varner Harbor is the boat launching facility at the SSSRA which allows the public to enjoy various recreational boating activities at the Salton Sea, and water safety/rescue personnel access to the sea.

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

- a) The project would increase the public use of the public facilities at Varner Harbor, as the harbor is now closed to boating. However, this would be a restoration of the original purpose of the harbor, which has had a long history of public use. The degree of use of this facility is not expected to be significantly different from use before the harbor was closed.
- b) This project would not require the construction or expansion of other recreational facilities that might have an adverse physical effect on the environment.

XV. TRANSPORTATION/TRAFFIC.

ENVIRONMENTAL SETTING

The SSSRA is accessed off of State Route 111 immediately to the east. Paralleling SR-111 is the Southern Pacific rail line. Light auto traffic and heavier truck traffic occurs on SR-111.

WOULD THE PROJECT:	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
a) Cause a substantial increase in traffic, in relation to existing traffic and the capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
b) Exceed, individually or cumulatively, the level of service standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Cause a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
d) Contain a design feature (e.g., sharp curves or a dangerous intersection) or incompatible uses (e.g., farm equipment) that would substantially increase hazards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

- Traffic may increase slightly at the SSSRA after the project is completed, as the harbor will be reopened and attract boaters. However, use is not expected to be substantially different than the level of use experienced before the harbor closed. No increase in the existing capacity of streets to handle traffic flow is necessary.
- This project will not exceed service standards established by the county congestion management agency for designated roads or highways.
- This project will not cause a change in air traffic patterns.

- d) This project does not contain a design feature or incompatible uses that would substantially increase hazards. This project will remove a boating hazard in the Varner Harbor channel which will reestablish a boating waterway that is currently closed.
- e) This project will not result in inadequate emergency access, but will open a boating channel allowing emergency vehicles to launch from the harbor and access the Salton Sea.
- f) This project will not result in inadequate parking capacity. There is an expansive parking lot at the Varner Harbor facility.
- g) This project is not in conflict with policies, plans or programs supporting alternative transportation.

XVI. UTILITIES AND SERVICE SYSTEMS.

ENVIRONMENTAL SETTING

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Exceed wastewater treatment restrictions or standards of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
Would the construction of these facilities cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
Would the construction of these facilities cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
d) Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
e) Result in a determination, by the wastewater treatment provider that serves or may serve the project, that it has adequate capacity to service the project's anticipated demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
g) Comply with federal, state, and local statutes and regulations as they relate to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x

DISCUSSION

a-g) No wastewater or solid waste, or facilities to accommodate these materials, would be generated by this dredging project.

CHAPTER 4

MANDATORY FINDINGS OF SIGNIFICANCE

	<u>POTENTIALLY SIGNIFICANT IMPACT</u>	<u>LESS THAN SIGNIFICANT WITH MITIGATION</u>	<u>LESS THAN SIGNIFICANT IMPACT</u>	<u>NO IMPACT</u>
WOULD THE PROJECT:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal?	<input type="checkbox"/>	x	<input type="checkbox"/>	<input type="checkbox"/>
b) Have the potential to eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
c) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects, and probably future projects?)	<input type="checkbox"/>	<input type="checkbox"/>	x	<input type="checkbox"/>
d) Have environmental effects that will cause substantial adverse effects on humans, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>		x

DISCUSSION

- a) The project has the potential to directly or indirectly impact the desert pupfish, a federally and state-listed endangered species. Pupfish individuals could be directly impacted by the dredging operation, or indirectly impacted by temporarily excluding pupfish from the construction zones or altering migration paths. Proposed mitigations would reduce the impacts below a level of significance. The project, although potentially impacting the desert pupfish during the brief construction phase, would be a net benefit to the pupfish in the long-term by assuring access to current habitat in the harbor which would be lost if the harbor channel is completely blocked by sediment.
- b) This project would not eliminate important examples of the major periods of California history or prehistory.
- c) Cumulative impact to the desert pupfish would be less than significant with the mitigation measures proposed. The project will be a long-term benefit to the pupfish by restoring and securing access to pupfish habitat in Varner Harbor.

- d) This project will not have environmental effects that will cause substantial adverse effect on humans, either directly or indirectly.

CHAPTER 5

SUMMARY OF MITIGATION MEASURES

The following mitigation measures would be implemented by DPR as part of the Varner Harbor Dredging Project.

AESTHETICS - NA

AGRICULTURAL RESOURCES - NA

AIR QUALITY - NA

BIOLOGICAL RESOURCES

MITIGATION MEASURE BIO-1
<ul style="list-style-type: none">▪ Pupfish-proof barriers (silt fencing) will be placed at both entrances to the harbor channel, and between the Salton Sea shoreline and the rebuilt northern jetty to exclude pupfish from the dredging and dredge deposit areas before dredging begins.▪ Once pupfish barriers are established, a pupfish removal live-trapping program will be instituted to remove pupfish trapped within the construction zone. Trapping will continue until 5 continuous days of trapping result in no pupfish captures. All captured pupfish will be transferred and released immediately within the adjacent shallow waters of the Salton Sea. Trapping protocols will follow USFWS and CDFG requirements.▪ Monitoring of pupfish in Varner Harbor will continue after the project is complete to assess on-going pupfish use of the harbor and channel.
MITIGATION MEASURE BIO-2
<ul style="list-style-type: none">▪ Dredging activities will not be conducted during the months of March, April and May to reduce potential impacts to breeding birds in the area.

CULTURAL RESOURCES - NA

GEOLOGY AND SOILS - NA

HAZARDS AND HAZARDOUS MATERIALS

MITIGATION MEASURE HAZMAT 1
<ul style="list-style-type: none">▪ Silt fencing will be utilized to restrict the dispersal of any sediment released into the water column during the dredging of the channel and deposition of dredged materials on the adjacent shoreline. Silt fencing will be placed across each side of the channel, harbor side and seaside, during dredging, and just offshore of the deposition site, between the shoreline and the rebuilt northern jetty.

HYDROLOGY AND WATER QUALITY

MITIGATION MEASURES HYDRO-1

MITIGATION MEASURE HYDRO-1
<ul style="list-style-type: none">▪ Silt fencing will be utilized to restrict the dispersal of any sediment released into the water column during the dredging of the channel and deposition of dredged materials on the adjacent shoreline. Silt fencing will be placed across each side of the channel, harbor side and seaside, during dredging, and just offshore of the deposition site, between the shoreline and the rebuilt northern jetty.
MITIGATION MEASURE HYDRO-2
<ul style="list-style-type: none">▪ Best Management Practices will be observed during the dredging operations to assure that potential pollutants and eroded soils are excluded from the Salton Sea, Varner Harbor, and the harbor channel. These practices include:<ol style="list-style-type: none">1) Areas of disturbed soil with slopes toward the sea will be stabilized to reduce erosion potential.2) Staging/storage areas for equipment and materials will be located at least 100 feet from the shoreline of the harbor or sea. Equipment shall be checked and maintained daily to prevent leaks of pollutants into the harbor or sea. No equipment maintenance will be done within 100 feet of the harbor or sea.3) No project debris or rubbish will be allowed to enter into or be placed where it may be washed by rainfall or runoff in the harbor or sea.

LAND USE AND PLANNING - NA

MINERAL RESOURCES - NA

NOISE - NA

POPULATION AND HOUSING - NA

PUBLIC SERVICES - NA

RECREATION - NA

TRANSPORTATION/TRAFFIC - NA

UTILITIES AND SERVICE SYSTEMS - NA

CHAPTER 6

REFERENCES

Biological Resources

Refer to Appendix A

Hazards and Hazardous Materials

Refer to Appendix A

Hydrology and Water Quality

Refer to Appendix A

Report Preparation

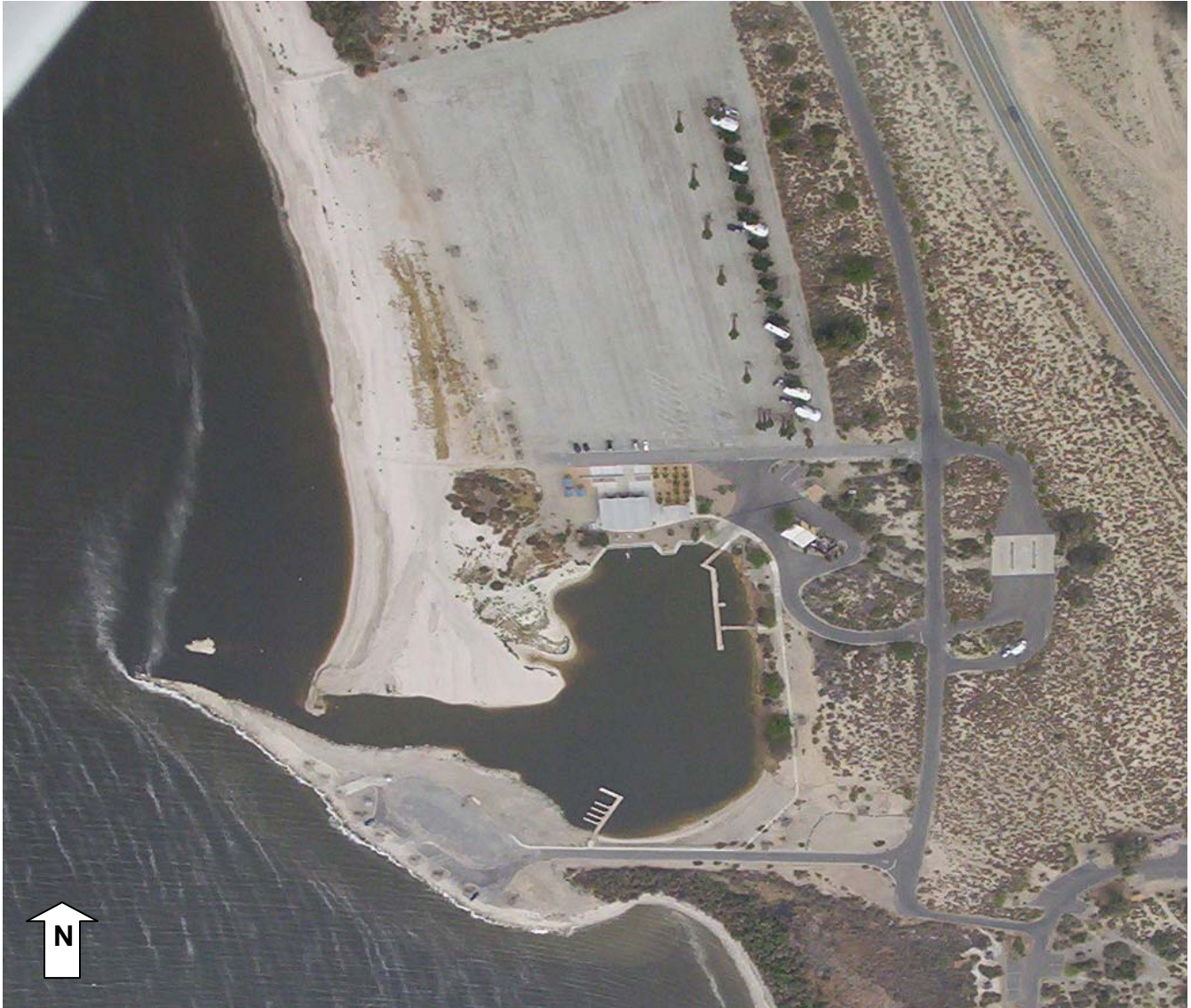
CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

David Lawhead – District Environmental Coordinator
Jason Duke – Acting District Maintenance Chief
Sue Wade – Associate State Parks Archeologist
Larry Hendrickson – Senior Park Aide, Botanist
Steve Bier – Ranger, SSSRA

APPENDIX A

**NATURAL RESOURCES REPORT FOR THE
VARNER HARBOR DREDGING PROJECT**

**Natural Resources Technical Report
Varner Harbor Channel Dredging Project
Salton Sea State Recreation Area
Riverside County, California**



**Prepared by:
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December 2006**

Natural Resources Technical Report For the Varner Harbor Channel Dredging Project, Salton Sea State Recreation Area

Introduction

The Salton Sea State Recreation Area (SSSRA) is an 18,000-acre property on the eastern shore of the Salton Sea (Figure 1) managed by the California Department of Parks and Recreation (State Parks) to supply recreational opportunities for the citizens of the State of California. Recreational activities at the SSSRA center around the Salton Sea, and include fishing, boating, shoreline camping, swimming, and bird-watching. A key facility at the SSSRA is Varner Harbor, a small man-made harbor on the northeast shoreline of the Salton Sea, just south of the community of North Shore (Figure 2). This small harbor serves as one of the few boat launch locations at the Salton Sea. This harbor serves not only recreationists but law enforcement personnel and scientific researchers that also need access to the sea.

Because of the shallow depth of the Salton Sea, and the direction of the prevailing winds, sediment flow from freshwater flows into the sea have resulted in sediments being deposited in Varner Harbor, and particularly within the narrow channel that connects the harbor with the sea. This sediment deposition has been aggravated because past changes in the water level of the Salton Sea has resulted in the inundation of the jetty on the north side of the channel entrance. The purpose of this jetty was to divert sediment flows away from the harbor, and without it this protection has been lost.

Varner Harbor currently is closed to boating because sediment in the harbor channel precludes boat access into and out of the harbor. The harbor channel has an average depth of only two to four feet, with the channel being considerably narrowed due to sediment deposits. State Parks is proposing to dredge the current harbor channel and to rebuild the north jetty at its previous location. This project will re-establish the full functionality of Varner Harbor, and allow access to the sea by all interested parties. The future of the Salton Sea is currently unsettled. It is likely that, based upon our current understanding, that the level of the Salton Sea will begin dropping significantly within the next ten years due to diversion of freshwater runoff that currently flows into the sea. The future of Varner Harbor as a functional recreational destination is uncertain, but until the future becomes clearer State Parks will continue to maintain and enhance Varner Harbor for the enjoyment and safety of those who visit the SSSRA.

Project Description

This dredging project is proposed by State Parks to uphold our commitment to keeping our recreational facilities at the Salton Sea safe, operational, and open to the public. Varner Harbor is the only State Parks boat launch facility to access the sea, and is located at the headquarters area of the SSSRA.

Elevation changes in the sea over the years have altered the harbor and channel structures and functions. In the 1950's, the channel was sustained by two jetties, preventing current and wind-driven silt and barnacle deposits from flowing into the channel. In the 1970's, a rise in the elevation of the sea inundated SSSRA shoreline structures, and the northern jetty was submerged and ceased functioning as a sediment diversion structure. Since the loss of the north jetty, various attempts at dredging the harbor have ended in the same results, continued sediment deposits. In order to reclaim Varner Harbor, the channel needs to be dredged and the north jetty reconstructed. Currently the channel has an average depth of two to four feet, and a narrow point approximately 10 feet wide (Figures 3 and 4). A 1,000 cu.yds sand bar is also choking the channel entrance. The proposed project would remove 7,000 to 8,000 cu.yds of deposited material throughout the 450-foot long harbor channel. All work would be performed by State Parks personnel using an excavator with a 60'– 100' reach from the shoreline of the channel. After dredging, the existing south jetty would be reinforced with rip rap (approximately 300 cubic yards) to reduce future erosion by wave action (see Figure 5).

The north jetty will be reconstructed (see Figures 3 and 6) before the channel is dredged. The reconstructed north jetty will provide access for equipment to conduct dredging operations on portions of the harbor channel. This structure will be approximately 200 feet long by 12 feet wide (jetty footprint 2,400 sq. ft.) by 6 feet high, and will be constructed of approximately 570 cu. yds. of 36" exploded angular rip rap, filter fabric, and native soils. The jetty will be built over the footprint of the original north jetty, which is now submerged below the current level of the sea. The placement of the north jetty will extend the life of the channel and harbor, thus extending the time before any re-dredging of the channel is needed, and sustaining a safe navigable passage to the Salton Sea for SSSRA visitors.

All dredged materials will be placed on the beach immediately north of the harbor channel (Figure 3). The dredged material will be spread over a 1.5-2.0 acre area, as indicated on Figure 3. An approximately 3-foot tall berm will be created no less than 10 feet from the Slaton Sea's ordinary high water mark. All dredged material will be placed behind the berm to prevent any surface flow of dredge material or water back into the sea. If needed, straw waddles will also be placed on the upslope side of the berm to aid in retention of dredged material and water. The use of the adjacent beach as a deposit site will simplify the logistics of the project, and help replenish and expand the public beach in this area. Any foreign debris or large rocks that could be a nuisance or threat to public safety will be removed from the sediments deposited on the beach and relocated to another appropriate area.

This project is also proposing a repeat dredging operation to maintain the harbor channel sometime within the next five years. The procedures would all be the same, except that it is anticipated that no more than 4,000 cu.yds of material would be removed. This second phase of the project would only involve maintenance dredging, and no jetty construction. It is estimated that for each dredging project that no more that two weeks of construction time will be required.

Existing Environmental Conditions

The SSSRA incorporates over 18,000 acres of the Salton Sea, sea shoreline, and uplands on the eastern boundaries of the Salton Sea. State Parks owns/manages these lands for their natural and cultural resource values, and for public recreation and education.

Varner Harbor represents a very small percentage of the overall lands within the SSSRA, but plays an important role in meeting State Parks' responsibilities for public recreation.

Vegetation

Baseline environmental information incorporated into this report was assembled from a number of sources. Botanical information was collected by two State Parks biologists, Larry Hendrickson and Brooke Lyons, during a site visit on April 13, 2006. Information on wildlife species was assembled from species lists generated by State Parks biologists and rangers. Information related to Salton Sea hydrology and water quality was obtained from published literature, and specific citations are listed in the report.

The uplands surrounding Varner Harbor, and the harbor channel in particular, are very sparsely vegetated (Figure 4). The uplands consist of old harbor and channel dredging deposits, primarily sands, silts and barnacle deposits. In addition, the lands abutting the channel are subjected to heavy public foot traffic, as this site is adjacent to the SSSRA Visitor's Center, and also support facilities such as restrooms, picnic areas, and a large paved parking lot. Therefore, little vegetation or potential wildlife habitat is present, except for open water and shoreline/open beach habitat.

A very sparse array of plant species associated with alkali scrub habitat is present in the immediate vicinity of the harbor channel proposed for dredging. The following plant species are present in low numbers: western sea-purslane (*Sesuvium verrucosum*), salt heliotrope (*Heliotropium curassavicum*), tamarisk/saltcedar (*Tamarix* sp.), iodine bush (*Allenrolfea occidentalis*), saltgrass (*Distichlis spicata*), and alkali goldenbush (*Isocoma acradenia* var. *eremophila*). Along the far eastern shoreline of Varner Harbor is a small area (approximately 2,000 sq. ft.) of freshwater marsh dominated by cattails (*Typha* sp.). This habitat is sustained by a small freshwater spring/seep that flows into the harbor at this point. This marshy area is over 300 feet from the harbor channel. In addition, fan palms (*Washingtonia filifera*) and non-native mesquite (*Prosopis* sp.) are present just east of the harbor edge.

Wildlife

A list of wildlife species observed at Varner Harbor, and its immediate vicinity, is found in Appendix 1. This list was compiled by State Parks rangers at the SSSRA. Many bird species are only found seasonally at the harbor, whereas mammals, reptiles and fish tend to be year-round residents. Common species include the killdeer, black-necked stilt, great blue heron, Anna's hummingbird, great horned owl, ruddy duck, eared grebe,

coyote (*Canis latrans*), bobcat (*Lynx rufus*), black-tailed jackrabbit (*Lepus californicus*), raccoon (*Procyon lotor*), side-blotched lizard, gopher snake, and tilapia.

Sensitive Species

No federal or state-listed threatened or endangered plant species are known to occur in the vicinity of Varner Harbor, and given the nature of the habitat adjacent to the harbor, none would be anticipated. No plant species considered sensitive by the California Native Plant Society have been found at Varner Harbor.

The brown pelican (*Pelicanus occidentalis*), a federal and state-endangered species, is observed in the vicinity of the harbor during summer. This species forages at the Salton Sea as it disperses north from its breeding colonies in Mexico. This species has been subject to botulism events at the sea in the past. Anerobic water conditions at the sea are most common during the summer, when this species is present. Fish, and other wildlife species that feed upon fish, have also been subject to summer die-offs due to these conditions.

The desert pupfish (*Cyprinodon macularis*) is the only fish species endemic to the Salton Sink. This species is a Federal and State-listed endangered species. The primary breeding locations for this species at the Salton Sea are the agricultural drains at the northern and southwestern ends of the sea, San Felipe Creek, and Salt Creek on the eastern side of the sea. Salt Creek lies four to five miles south of Varner Harbor. The desert pupfish is a species that is adapted to living in environments with extreme fluctuations in temperature, salinity, and oxygen levels. This adaptability has allowed them to persist in and around the Salton Sea, despite the environmental stresses and variations that are present at the sea.

Until recently it was not known that the desert pupfish was present in Varner Harbor. However, the California Department of Fish and Game (CDFG) has been conducting fish trapping and monitoring in the harbor since 2002 (622.5 trap-hours total). Since trapping efforts began in July 2002, CDFG has trapped pupfish in the harbor on 13 different occasions for a total of 174 pupfish. The highest total collected during a single trapping effort was 104 pupfish on June 15, 2002. Since March 2006, CDFG has trapped only one pupfish in the harbor (CDFG unpublished data, 2006).

Pupfish are not documented to breed in Varner Harbor, although suitable spawning habitat exists (CDFG personal communication). This species may be attracted to a small freshwater spring/seep that empties into the harbor. It is believed that the desert pupfish uses the Salton Sea to disperse and move between different shoreline breeding locations (Sutton, 2002). It appears likely that Varner Harbor, being a part of the Salton Sea shoreline, is part of a natural dispersal route for this species. The small area of freshwater flow along the eastern edge of the harbor may also act as a refuge for the pupfish during dispersal.

If sedimentation of the harbor channel continues unabated pupfish will no longer be able to access the harbor, and there will be an effective loss of a significant area of current pupfish habitat as the water quality within the harbor continues to decline due to stagnation. The restoration of the harbor channel will actually be a long-term benefit to the local pupfish population by assuring continued access to the harbor and its potential refugia and spawning habitat.

Water Quality

The water quality of the Salton Sea has been studied extensively by researchers. Major topics of water quality study have included salinity, oxygen levels, nutrients, metals, and pesticides (Tostrud 1997; Watts et al. 1999; Setmire et al. 1990; Setmire et al., 1993; Holdren and Montano, 2002; and Schroeder et al. 2002). Of primary concern, because of its potential to accumulate in the environment and become toxic to certain wildlife species, is the metal selenium. Because the Salton Sea has no surface outflow, metals such as selenium tend to remain in the Salton Sea ecosystem. Most selenium becomes sequestered in the sediments of the Salton Sea. Because harbor channel dredging has the potential to stir up sediments in the vicinity of the dredge site, selenium that is sequestered could be released into the water column temporarily. Because of this potential impact, this report will focus on the selenium issue.

Selenium is a natural component of Colorado River water, which is diverted to irrigate croplands in the Imperial and Coachella Valleys. Significant evapo-transpiration tends to concentrate the selenium even more before the irrigation water drains from agricultural fields into the local rivers. Primary freshwater input to the Salton Sea is via the New, Alamo, and Whitewater Rivers. Of the approximately 1,346,000 acre-feet of annual water flow into the Salton Sea, the following rivers supply the indicated percentage of total input into the sea: Alamo River – 46.1%, New River 32.5%, and the Whitewater River - 5.9 % (Salton Sea Authority/USBR, 2000). These are the sources of selenium flowing into the Salton Sea.

Schroeder, et al. (2002) provide a detailed discussion of selenium dynamics in the Salton Sea. The following discussion summarizes pertinent scientific findings that are important to the discussion of Varner Harbor dredging. First, Colorado River water imported for crop irrigation has a higher concentration of selenium (2.5 micrograms/liter) than does the water of the Salton Sea (0.5-2.0 microgram/liter). Irrigation water that has been applied and drained off has a still higher concentration (30 microgram/liter) due to evapo-transpiration. All of the water flowing into the sea is in an aerobic state, and selenium occurs dominantly as the highly soluble selenate. Second, much of the biogeochemical cycle of selenium in the sea takes place in anoxic environments, especially in the deeper waters and bottom sediment of the sea. This environment results in the reduction of selenate to selenite, and ultimately to metal and organically bound selenide. This form of selenium has a high affinity for sorption onto sediments, especially organic matter, clay minerals, and iron oxyhydroxides, and the solubility of metal selenides is extremely low. Third, the amount of selenium in the sea's biota is relatively low, and has not been found in toxic levels. Again this is due to the relatively low water concentrations of selenium.

And fourth, a small percentage of total selenium flowing into the sea is lost by volatilization (dimethyl selenide).

Additional research has shown that, in general, selenium concentrations in sea bottom sediments increase as you go from the river mouths and shorelines toward the deeper central areas of the sea. The coarser sediments near the shorelines of the Salton Sea have lower concentrations of selenium than do the finer sediments that are deposited further from shore in the deeper waters. In addition, the bulk of selenium deposits are found in the top 30 cm of the sediment column (Vogl and Henry, 2002).

Several models of selenium distribution have been created for the Salton Sea based upon sediment sampling (Vogl and Henry, 2002; Crooks and Kulpa, 2005). In general, these models indicate that selenium concentrations are lower in the southern half of the sea, and higher in the central and northern portions. As to Varner Harbor specifically, the models show some minor differences in predicted selenium levels, but in general it is predicted to be relatively low (Figure 7). This is consistent with the findings discussed above that show selenium levels to be higher in fine grained sediments further from shore and less in coarser grain sediments near shore. The sediments proposed for dredging in the Varner Harbor channel are primarily coarse-grained sands and barnacle shells. It is believed that much of the channel sediments are actually sandy deposits picked up by wave action from the beach immediately north of the channel and deposited into the channel. The loss of the north jetty has allowed for this deposition pattern. As the channel has become occluded, the adjacent beach has shrunk in size.

Project Impacts

The proposed project would remove 7,000 to 8,000 cubic yards of sediments from the existing 450-foot long by 60-foot wide Varner Harbor channel and deposit the dredged material on the beach immediately to the north of the channel. This would basically return the sandy sediments back to the beach where they originated. The 200-foot long north channel jetty would be reconstructed to retard further sedimentation of the channel. The north jetty will actually be constructed before dredging begins because this jetty will assist in accessing the channel for dredging. The existing south jetty will also be reinforced with the same type of rip rap as the reconstructed north jetty, to reduce the impacts of wave action on the jetty and retard erosion. The entire project will be completed within a two week time period.

A second dredging is proposed to occur within five years of the initial dredging project as a routine maintenance effort. Only 4,000 cubic yards at most would be removed from the channel and deposited on the northern beach, or another appropriate location. It is anticipated that the reconstruction of the northern jetty will significantly reduce the deposition of sediment into the channel, and make this follow-up dredging a quicker and simpler project. All of the conditions in place for the initial dredging will also be applied to the second dredging operation. There is a possibility that the dredged sediments from the second dredging operation cannot be accommodated on the adjacent beach to the

north. Should this be the case then the permitting agencies will be consulted about appropriate alternative sites, and any necessary permit amendments, or new permits, will be obtained before a second dredging is initiated.

Vegetation

Little or nor vegetation would be impacted by this project. Almost all of the upland shoreline adjacent to the harbor and channel are devoid of ground cover, but is simply exposed sandy-type soils that are deposits for past dredging efforts at the harbor, and consist of shoreline sediments and barnacle shells. Access to the channel would be through a developed parking lot at the Salton Sea SRA Visitor Center.

Wildlife

Wildlife species that may occur in the vicinity of the harbor are expected to experience little or no impacts from the dredging project. The impacts to the upland areas would be temporary, approximately two weeks, and consist of the presence of an excavator dredging the channel from the side bank and depositing the dredged materials on the adjacent beach to the north. Dredging activities would not occur between March and May to avoid impacts to any nesting shorebirds and/or waterfowl in the vicinity. Wildlife species, including any wintering shorebirds or waterfowl, may be temporarily displaced from foraging or roosting in the channel area due to the presence of dredging equipment, noise from the equipment, or the deposit of dredged material on the beach to the north. These short-term temporary impacts would not be significant.

Sensitive Species

The brown pelican is not expected to be present in significant numbers, if at all, during the fall and winter months, so impacts to this endangered species are not expected to be significant if the project proceeds during this time period. During summer months, brown pelicans may avoid the harbor channel area during dredging due to the presence of equipment and noise from the dredging operation, but again, the impact would be very minor and temporary. No take of this species is anticipated.

The documented presence of the desert pupfish within Varner Harbor indicates that this species does use the harbor channel during the course of dispersal. Because of this, it cannot be assured that the dredging activities will avoid all impacts to this species. Because of the difficulty in assessing the numbers and locations of this species at any particular time, it must be assumed that incidental take will occur, either in the form of harassment or direct loss of individual fish. Individual fish could be taken in the course of sediment removal in the channel, or during construction of the northern jetty. It is assumed that pupfish travel along the shoreline of the Salton Sea in their movements between breeding areas. In addition, passage between the small freshwater marsh area within Varner Harbor and the sea would be blocked for up to two weeks because of the dredging operations. What specific impact, if any, this might have on pupfish and pupfish dispersal is not known.

Impacts or risks to the desert pupfish would potentially differ depending upon the time of year that the project occurs. During the warmer times of the year, including the breeding season, pupfish are more active. This increase in movements has both positive and negative elements. Migratory movements are more likely during warmer periods, and dredging during those times could temporarily interrupt migratory movements. However, more active pupfish could more readily avoid direct impacts from the removal of excavated sediment or the placement of riprap during jetty construction. As discussed in more detail below, more active pupfish would be more readily trapped to remove them from the project area before dredging occurred. In contrast, pupfish are less active during the cooler months. This means migratory movements would be less disrupted by the project, and there would be fewer fish potentially moving into the project area while dredging occurred. However, reduced activity means that pupfish would be more difficult to trap, and perhaps not all pupfish could be removed from the project area before dredging. There is probably not one ideal time to carry out the project with respect to pupfish. Each season has potential impacts and potential benefits that reduce impacts.

It should be noted that if the dredging project does not proceed it is likely that the harbor channel mouth to the Salton Sea will become completely blocked. This would prevent pupfish from accessing the harbor, and trap any pupfish in the harbor that were present when the blockage formed. In the long-term, the dredging project should benefit the pupfish by maintaining access to the harbor, including the freshwater habitat at the eastern end (Figure 6). The long-term benefits to the desert pupfish from the dredging project are potentially significantly greater than the short-term temporary impacts due to harbor channel dredging.

Water Quality

The primary concern regarding water quality from the implementation of the dredging project is the potential release of selenium within the channel deposits into the water column. This release has the potential to be taken up into the food-chain and cause harm to fish-eating wildlife in particular. While no direct measurements of selenium concentrations within sediments have been made in the harbor channel, there is evidence from research discussed above that the likelihood is very low that the dredging operation would present a hazard to people or wildlife due to selenium exposure. This conclusion is based upon the following research results:

1. Selenium concentrations in the waters of the Salton Sea are currently low (0.5-2.0 micrograms/liter), and not close to U.S. Environmental Protection Agency chronic water quality criterion that is protective of wildlife and aquatic life, 5 micrograms/liter.
2. Selenium concentrations in the sea's sediments tend to be lowest along the shoreline of the sea and greatest in the deeper central regions of the sea. Varner Harbor is clearly a shoreline facility, and one would expect to have a lower concentration of selenium in its sediments.

3. Concentrations of selenium are lowest in the larger-grained sediment, and greater in the finer-grained silts and clays. The finer grained sediments tend to flow further out into the sea and be deposited in the deeper sections, again far from Varner Harbor.
4. Sediment proposed to be excavated from the harbor channel is coarse-grained sand mixed with barnacle shells, the material least likely to have significant selenium concentration. It is believed that most of the sediments deposited in the harbor channel come from sand erosion off of the beach to the immediate north of the channel. This erosion has been caused by a combination of natural wave action, and the loss of the north harbor jetty, which has allowed the eroded sand to flow into the channel.
5. The harbor dredging project will require no more than two weeks to complete. Any sediment stirred up during the harbor dredging activities will settle back to the bottom of the sea within a short period of time, and not add any significant amount of selenium (i.e., water soluble selenate) to the overall level of selenium in the waters of the Salton Sea or the food-chain. The percentage of total Salton Sea sediment disturbed by this temporary project is tiny and insignificant.

Mitigation Measures

Mitigation measures will be implemented to address two areas of potential impact: desert pupfish, and water quality.

Desert Pupfish

It is not feasible to try and capture and hold all of the pupfish within or adjacent to Varner Harbor to prevent any direct or indirect impacts from the dredging operations. However, certain measures can be taken to reduce the likelihood of impacts to this species by restricting access to the dredging and deposition sites.

State Parks proposes to place net barriers across each entrance to the channel before any dredging operations begin to exclude pupfish from entering the channel either from the harbor or the Salton Sea. These net barriers will be maintained until all dredging is completed. A net barrier will also be placed immediately north of the site for north jetty reconstruction, from the existing “island” tip of the remnant north jetty eastward to the beach.

A trapping program will be instituted by qualified and permitted personnel before dredging begins to remove any pupfish within the harbor channel and proposed north jetty areas once the pupfish netting/barriers have been installed. Trapping will be conducted for a minimum of five consecutive days at each site. If no pupfish are caught, dredging and/or jetty construction will commence. If pupfish are caught, then trapping will continue until no pupfish have been captured for five consecutive days. All trapped pupfish will be transferred immediately to the Salton Sea side of the fish barriers and

released. Specific trapping protocols required by the USFWS and CDFG will be followed.

CDFG will continue to monitor pupfish at the harbor as it has in the past. DPR will provide additional trained monitors during dredging operations to make sure that the fish barriers are properly maintained.

Water Quality

Fish barriers discussed above will be composed of appropriate silt fencing to confine the flow of any sediment stirred up during dredging to the harbor channel. Best Management Practices will be employed during dredging operations to assure that the Salton Sea is protected from potential pollution sources. All motorized equipment will be serviced and fueled at least 100 feet from the sea's shoreline. Barriers around dredging equipment will be placed to prevent any accidental spill of materials into the sea.

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Appendix 1

Wildlife Species of Varner Harbor

Fish

Desert Pupfish (*Cyprinodon macularis*)
Tilapia (*Tilapia zillii*, *Oreochromis mossambicus*, and *O. urolepis hornorum*)
Sailfin Molly (*Poecilia latipinna*)
Carp (*Cyprinus* sp.)
Longjaw Mudsucker (*Gillichthys mirabilis*)
Red Shiner (*Cyprinella lutrensis*)
Mosquitofish (*Gambusia affinis*)

Amphibians and Reptiles

Desert iguana (*Dipsosaurus dorsalis*)
Zebra-tailed lizard (*Callisaurus draconoides*)
Side-blotched lizard (*Uta stansburiana*)
Desert spiny lizard (*Sceloporus magister*)
Coachwhip (*Masticophis flagellum*)
Gopher snake (*Pituophis melanoleucus*)
Western diamondback (*Crotalus atrox*)

Birds

Documented breeding species

Black-necked stilt (*Himantopus mexicanus*)
Killdeer (*Charadrius vociferous*)
American avocet (*Recurvirostra americana*)
Great blue heron (*Ardea herodias*)
Black-crowned night heron (*Nycticorax nycticorax*)
Great egret (*Casmerodius albus*)
Cactus wren (*Campylorhynchus brunneicapillus*)
Verdin (*Auriparus flaviceps*)
Anna's hummingbird (*Calypte anna*)
Barn owl (*Tyto alba*)
Great horned owl (*Bubo virginianus*)

Winter Visitors

Eared grebe (*Podiceps nigricollis*)
White pelican (*Pelicanus erythrorhynchos*)
Green-backed heron (*Butorides striatus*)
Ruddy duck (*Oxyura jamaicensis*)
Osprey (*Pandion haliaetus*)

Summer Visitors

Black skimmer (*Rhynchops niger*)
Forester's tern (*Sterna forsteri*)
Western grebe (*Aechmophorus occidentalis*)
Clark's grebe (*Aechmophorus clarkii*)
Common loon (*Gavia immer*)
American bittern (*Botaurus lentiginosus*)
Brown pelican (*Pelicanus occidentalis*)

Mammals

Coyote (*Canis latrans*)
Bobcat (*Lynx rufus*)
Kit fox (*Vulpes macrotis*)
Raccoon (*Procyon lotor*)
Mule deer (*Odocoileus hemionus*)
Desert kangaroo rat (*Dipodomys deserti*)
Black-tailed jackrabbit (*Lepus californicus*)
Desert cottontail (*Sylvilagus audubonii*)
Field mouse (*Peromyscus* sp.)
Round-tailed ground squirrel (*Spermophilus tereticaudus*)
Unidentified bat species are also known to forage over the harbor area.

APPENDIX B

MITIGATION MONITORING AND REPORTING PLAN

**Varner Harbor Dredging Project
Mitigation Monitoring and Reporting Plan
November 2006**

Mitigation Measure	Timing	Responsible for Implementing Mitigations	Responsible for Insuring Implementation	Required for Task to be Complete	Verification and Implementation	
					Date Completed	Status / Comments
Biological Resources						
Pupfish-proof barriers (silt fencing) will be placed at both entrances to the harbor channel, and between the Salton Sea shoreline and the rebuilt northern jetty, to exclude pupfish from the construction and dredging areas before dredging begins.	Winter/Spring 2007	Project Manager, Senior Environmental Scientist	Project Manager, Senior Environmental Scientist	Silt fencing and fence anchors		
Once pupfish barriers are established, a pupfish removal live-trapping program will be instituted to remove pupfish trapped within the construction zone. Trapping will continue until 5 continuous days of trapping result in no pupfish captures. All captured pupfish will be transferred and released immediately within the adjacent shallow waters of the Salton Sea. Trapping protocols will follow USFWS and CDFG requirements.	Winter/Spring 2007	Project Manager, Senior Environmental Scientist	Project Manager, Senior Environmental Scientist	Fish Traps		
Monitoring of pupfish in Varner Harbor will continue after the project is complete to assess on-going pupfish use of the harbor and channel.	Winter/Spring 2007	Project Manager, Senior Environmental Scientist	Project Manager, Senior Environmental Scientist	Fish Traps		
Dredging activities will not be conducted during the months of March, April and May to reduce potential impacts to breeding birds in the immediate area, unless pre-dredging field surveys confirm that no breeding activity is occurring on the beaches adjacent to the project site.	Winter/Spring 2007	Project Manager, Senior Environmental Scientist	Project Manger, Senior Environmental Scientist	Biological surveys of beaches adjacent to the project site for the presence of nesting or fledging bird species.		
Hazards and Harardous Materials						
Silt fencing will be utilized to restrict the disposal of any sediment released into the water column during the dredging of the channel. Silt fencing will be placed across each channel opening, seaside and harbor-side, before dredging, and between the northern jetty construction site and the seashore to the north.	Winter/Spring 2007	Project Manager, Senior Environmental Scientist	Project Manager, Senior Environmental Scientist	Silt fencing and fence anchors		

**Varner Harbor Dredging Project
Mitigation Monitoring and Reporting Plan
November 2006**

Mitigation Measure	Timing	Responsible for Implementing Mitigations	Responsible for Insuring Implementation	Required for Task to be Complete	Verification and Implementation	
					Date Completed	Status / Comments
Hydrology and Water Quality						
Silt fencing will be utilized to restrict the disposal of any sediment released into the water column during the dredging of the channel. Silt fencing will be placed across each channel opening, seaside and harbor-side, before dredging, and between the northern jetty construction site and the seashore to the north.	Winter/Spring 2007	Project Manager, Senior Environmental Scientist	Project Manager, Senior Environmental Scientist	Silt fencing and fence anchors		
Best Management Practices will be observed during the dredging operations to assure that potential pollutants and eroded soils are excluded from the Salton Sea, Varner Harbor, and the harbor channel. These practices include: - Areas of disturbed soil with slopes toward the water will be stabilized to reduce erosion potential. -Staging/storage areas for equipment and materials will be located at least 100 feet from the shoreline of the harbor or sea. Equipment shall be checked and maintained daily to prevent leaks of pollutants into the harbor or sea. No equipment maintenance will be done within 100 feet of the harbor or sea. - No project debris or rubbish will be allowed to enter into or be placed where it may be washed by rainfall or runoff into the harbor or sea.	Winter/Spring 2005	Project manager, Senior Environmental Scientist	Project Manager, Senior Environmental Scientist	DPR staff will select appropriate equipment and material storage areas at least 100 feet from the water's edge. Erosion control materials (e.g., straw bales) will be present on-site to control any problematic erosion areas.		